



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2015-0482; Directorate Identifier 2015-NE-06-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; GE Aviation Czech s.r.o. Turboprop Engines**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for certain serial number GE Aviation Czech s.r.o. M601E-11, M601E-11A, and M601F turboprop engines. This proposed AD was prompted by the determination that wear or cracking, and subsequent misalignment of the quill shaft of the engine and the power turbine (PT) shaft, may lead to rupture of the quill shaft, overspeed of the PT, and uncontained engine failure. This proposed AD would require inspection of the reduction gearbox and supporting cone. We are proposing this AD to prevent misalignment and rupture of the quill shaft, which could lead to overspeed of the PT, uncontained engine failure, and damage to the airplane.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Mail: Docket Management Facility, U.S. Department of Transportation, 1200 New Jersey Avenue SE., West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.
- Fax: 202-493-2251.

For service information identified in this proposed AD, contact GE Aviation Czech s.r.o., Beranových 65, 199 02 Praha 9 – Letňany, Czech Republic; phone: +420 222 538 111; fax: +420 222 538 222. You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-0482.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-0482; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the mandatory continuing airworthiness information (MCAI), the regulatory evaluation, any comments received,

and other information. The address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Philip Haberlen, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7770; fax: 781-238-7199; email: philip.haberlen@faa.gov.

#### **SUPPLEMENTARY INFORMATION:**

##### **Comments Invited**

We invite you to send any written relevant data, views, or arguments about this NPRM. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2015-0482; Directorate Identifier 2015-NE-06-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this NPRM. We will consider all comments received by the closing date and may amend this NPRM based on those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning this NPRM.

##### **Discussion**

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA AD 2015-0014, dated

January 30, 2015 (referred to hereinafter as “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

It has been identified that misalignment between the quill shaft of the engine and the Power Turbine (PT) shaft may lead to a rupture of the quill shaft.

This condition, if not detected and corrected, could lead to overspeed of the PT and consequent uncontained engine failure, possibly resulting in damage to the aeroplane and injury to occupants and/or persons on the ground.

You may obtain further information by examining the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-0482.

#### **Related Service Information under 1 CFR Part 51**

We reviewed GE Aviation Czech s.r.o. Alert Service Bulletin (ASB) No. M601E-11/28, M601E-11A/15, M601F/26, Revision 2, dated January 23, 2015. This service information describes procedures for inspecting the M601 reduction gearbox and supporting cone. This service information is reasonably available because the interested parties have access to it through their normal course of business or see ADDRESSES for other ways to access this service information.

#### **FAA’s Determination and Requirements of This Proposed AD**

This product has been approved by the aviation authority of the Czech Republic, and is approved for operation in the United States. Pursuant to our bilateral agreement with the European Community, EASA has notified us of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all information provided by EASA and determined the unsafe condition exists and is likely to exist or develop on other products of the same type

design. This proposed AD would require inspection of the reduction gearbox and supporting cone.

### **Costs of Compliance**

We estimate that this proposed AD affects 16 engines installed on airplanes of U.S. registry. We also estimate that it would take about 112 hours per engine to comply with this proposed AD. The average labor rate is \$85 per hour. Required parts cost about \$21,376 per engine. Based on these figures, we estimate the cost of this proposed AD on U.S. operators to be \$494,336. Our cost estimate is exclusive of possible warranty coverage.

### **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

## **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

## **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

**GE Aviation Czech s.r.o. (Type Certificate previously held by WALTER Engines a.s., Walter a.s., and MOTORLET a.s.):** Docket No. FAA-2015-0482; Directorate Identifier 2015-NE-06-AD.

#### **(a) Comments Due Date**

We must receive comments by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

None.

#### **(c) Applicability**

This AD applies to certain serial number (S/N) GE Aviation Czech s.r.o. M601E-11, M601E-11A, and M601F turboprop engines, as follows:

(1) Model M601E-11: S/N 833244, 841289, 852239, 861007, 881217, 884021, 892046, 892219, 894018, 903028, 913038, and 912023.

(2) Model M601E-11A: S/N 902004 and 883046.

(3) Model M601F: S/N 912001 and 924002.

#### **(d) Reason**

This AD was prompted by the determination that wear or cracking, and subsequent misalignment of the quill shaft of the engine and the power turbine (PT) shaft, may lead to rupture of the quill shaft, overspeed of the PT, and uncontained engine failure. We are issuing this AD to prevent misalignment and rupture of the quill shaft,

which could lead to overspeed of the PT, uncontained engine failure, and damage to the airplane.

**(e) Actions and Compliance**

Comply with this AD within the compliance times specified, unless already done.

(1) Within 300 flight hours, or six months after the effective date of this AD, whichever occurs first, inspect the reduction gearbox and supporting cone. Use Appendix 2, paragraph 4., Inspection, of GE Aviation Czech s.r.o. Alert Service Bulletin (ASB) No. M601E-11/28, M601E-11A/15, M601F/26, Revision 2, dated January 23, 2015, to do your inspection.

(2) If any crack is detected on the quill shaft, PT shaft, or the supporting cone, or if the quill shaft or PT shaft involute spline wear exceeds 0.12 mm, then before further flight, replace each cracked or worn part with a part eligible for installation.

**(f) Credit for Previous Actions**

If you performed the actions of paragraphs (e)(1) and (e)(2) of this AD before the effective date of this AD using GE Aviation Czech s.r.o. ASB No. M601E-11/28, M601E-11A/15, M601F/26, Revision 1, dated December 23, 2014, or Initial Issue, dated June 27, 2014, you have met the requirements of this AD.

**(g) Alternative Methods of Compliance (AMOCs)**

The Manager, Engine Certification Office, FAA, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request. You may email your request to: ANE-AD-AMOC@faa.gov.



**(h) Related Information**

(1) For more information about this AD, contact Philip Haberlen, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7770; fax: 781-238-7199; email: philip.haberlen@faa.gov.

(2) Refer to MCAI European Aviation Safety Agency AD 2015-0014, dated January 30, 2015, for more information. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2015-0482.

(3) GE Aviation Czech s.r.o. ASB No. M601E-11/28, M601E-11A/15, M601F/26, Revision 2, dated January 23, 2015, is co-published as one document with M601D/44, M601D-1/29, M601D-11NZ/18, M601E/59, and M601E-21/26, which are not incorporated by reference in this AD, can be obtained from GE Aviation Czech s.r.o., using the contact information in paragraph (h)(4) of this proposed AD.

(4) For service information identified in this proposed AD, contact GE Aviation Czech s.r.o., Beranových 65, 199 02 Praha 9 – Letňany, Czech Republic; phone: +420 222 538 111; fax: +420 222 538 222.

(5) You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Issued in Burlington, Massachusetts, on March 27, 2015.

Thomas A. Boudreau,  
Acting Directorate Manager, Engine & Propeller Directorate,  
Aircraft Certification Service.

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